

## VARIABLE TPI DATA RECORDING IN HARD DISC DRIVES

### ABSTRACT OF THE DISCLOSURE

A data storage device has optimized track densities for each of a plurality of data storage surfaces. Each storage surface of the data storage device has a plurality of adjacent data storage tracks positioned at a track density defined by the width of the confronting head. Head/surface combinations are arranged so that the average of the track densities of all of the surfaces equals a selected nominal track density for the data storage device. A ratio between the track density and the servo band density is stored for each data storage surface. During operation of the storage device, the track density and other parameters necessary to the operation of the device are re-calculated from the ratio and established device parameters.